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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,279	11/18/2003	Ralf Koch	DKT00098	6065
7590	07/21/2004		EXAMINER	TRIEU, THAI BA
Borg Warner Inc. Patent Department Powertrain Technical Center 3800 Automation Ave, Ste. 100 Auburn Hills, MI 48326-1782			ART UNIT	PAPER NUMBER
			3748	
				DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/716,279	KOCH ET AL.
	Examiner	Art Unit
	Thai-Ba Trieu	3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 21-40 is/are pending in the application.
 - 4a) Of the above claim(s) 31,32 and 40 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 21-30,33-37 and 39 is/are rejected.
- 7) Claim(s) 38 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11/18/2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention: **The species of Figures 1-2, the species of Figure 3, the species of Figure 4, and species of Figure 5.**

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claim 21 appears to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Stephan A. Pendorf (Reg. No. 32,665) on Tuesday July 13, 2004 a provisional election was made with traverse to prosecute the invention of the species of Figures 1-2, claims 21-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims **31-32 and 40** are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention of the species of Figures 3 and 4.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Preliminary Amendment

The Preliminary amendment filed on November 18, 2003 is acknowledged. Claims 1-20 were cancelled, and claims 21-40 were added. Applicants provisionally elected the species of Figures 1-2 with traverse, for being examined on the merits. Claims 21-30 and 33-39 read on the species of Figures 1-2. However, since claims 31-32 and 40 brawn to the non-elected species of Figures 3 and 4, claims 31-32 and 40 have not been examined on their merits.

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Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The listing of references of German Patents DE 100 29 640 C2, DE 100 48 105 A1, DE 43 30 487 C1, and DE 196 25 237 C2 on Pages 1, and 3-4, in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "***compensation ring exhibiting a smaller outer diameter and/or a larger inner diameter and/or a smaller weight than the nozzle ring***" (See Claim 28) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if

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only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. Applicant discloses "invention concerns an exhaust gas turbocharger for an internal combustion engine of the type described in the ***pre-characterizing portion of Patent Claim 1***" (Page 1, Paragraph [0001], lines 1-3), and " This task is inventively solved by an exhaust gas turbocharger ***with characteristics of claim 1***" (See Page 5, Paragraph [0011], lines 4-6); however, claim may be amended or cancelled during the prosecution of the instant application, and therefore, is not an appropriate characterization of the invention. Specifically, in the instant application, claim 1 was cancelled by the preliminary Amendment filed on November 18, 2003.

2. The disclosure is objected to because of the following informalities:

- On Page 1, Paragraph [0002], line 2, "**DE 100 29 640 2C**" should be replaced by -- **DE 100 29 640 C2** -- (for correcting typo error).
- Applicants should select only one of the following terms "**seal 22**", or "**sealing arrangement 22**", or "**piston ring 22**" to disclose the element "**22**" through out the specification and claims (See Page 15, Paragraph [0045], lines 4, 6-7) (for consistency or the whole specification and claims).

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specifically, the limitations of claim 28 -- ***the compensation ring exhibiting a smaller outer diameter and/or a larger inner diameter and/or a smaller weight than the nozzle ring*** – should be incorporated with the specification.

Claim Objections

Claims 38 and 39 objected to because of the following informalities:

- In claim 38, line 4, and claim 39, line 3, "**vane ring (6)**" should be replaced by -- **guide vane (6)** -- (for consistency with the specification and claims).

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- In claim 39, applicants should correct the grammatical error of the phrase of "**are mounted one sidedly on the vane ring**".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Since it is not clear that how smaller an outer diameter of the compensation ring is; how lager an inner diameter of the compensation ring is, how smaller/lighter weight of the compensation ring if being compared to the nozzle ring.

Applicants should clarify these limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-26, 35-37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Dakin et al. (Patent Number 5,851,104).

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Dakin discloses an exhaust gas turbocharger for an internal combustion engine, comprising at least one turbine adapted for receiving exhaust gas flow from the internal combustion engine, wherein the turbine (14) comprises:

a flow channel (12) with at least one radial in-flow cross-section (Not Numbered),
a nozzle ring (32) bordering the radial in-flow cross-section (Not Numbered),
a guide vane assembly (40) which is variably adjustable for adjusting the radial flow-through cross-section (Not Numbered), and

a compensation ring (22) displaceable axially from the nozzle ring towards the guide vane (40) (See Figure 1, Abstract, Column 1, line 29-42, Column 2, lines 66-67, and Column 3, lines 1-28);

wherein the compensation (22) of the nozzle ring is provided in a recess (Not Numbered) of the nozzle ring (32) (See Figure 1);

wherein at least one piston ring (28,36) is provided on an internal diameter and/or on an outer diameter of the compensation ring (22), via which the compensation ring (22) is sealed against the nozzle ring (32) (See Figure 1)

wherein the axial moveability of the nozzle ring is defined by at least one abutment or stop (Not Numbered) (See Figure 1)

wherein a first stop (Not Numbered) is formed by a recess (Not Numbered) in the nozzle ring whereby the travel of the ring in a first direction is limited (See Figure 1)

wherein a second stop (Not Numbered) is formed by the surface of the guide vanes (40), whereby a movement of the compensation ring (22) in a second direction opposite to the first direction is limited (See Figure 1);

wherein the compensation ring (22) is coupled rigidly with the nozzle ring (32) or is a component of the nozzle ring (See Figure 1);

wherein the nozzle ring (32) is a component of the housing (10) of the exhaust gas turbocharger (See Figure 1);

wherein the nozzle ring (7) is connected directly with the housing of the exhaust gas turbocharger by means ,of securing elements, in particular by means of screws (20) (See Figure 1); and

wherein the moveable guide vanes (40) of the guide vane assembly (40,30) are mounted one sidedly on the vane ring (40) and essentially contact only the compensation ring (22), however not the nozzle ring (32) (See Figure 1).

Claims 21, 29-30, and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Agahi et al. (Patent Number 5,564,895).

Agahi discloses an exhaust gas turbocharger for an internal combustion engine, comprising at least one turbine adapted for receiving exhaust gas flow from the internal combustion engine, wherein the turbine (10) comprises:

a flow channel (Not Numbered) with at least one radial in-flow cross-section (Not Numbered),

a nozzle ring (16) bordering the radial in-flow cross-section (Not Numbered),

a guide vane assembly (22) which is variably adjustable for adjusting the radial flow-through cross-section (Not Numbered), and

a compensation ring (14) displaceable axially from the nozzle ring (16) towards the guide vane (11) (See Figure 1, Abstract, Column 2, lines 21-67, Column 3, lines 1-67, and Column 4, lines 1-1-3);

wherein an actuation mechanism (Read as the line connecting 34 and 36 to 16, via 32) is provided, via which the compensation ring (14) and/or the nozzle ring (16) is pneumatically or hydraulically axially displaceable (See Figure 1)

wherein the actuation mechanism (Read as the line connecting 34 and 36 to 16, via 32) includes a pipeline (32) and/or a hollow screw connected with the compensation ring (14), via which the compensation ring (14) acted upon by pressure (See Figure 1, Abstract, Column 2, lines 21-67, Column 3, lines 1-67, and Column 4, lines 1-1-3);

wherein an external pressure supply device (Read as the line connecting 34 and 36 to 16, via 32) is provided on the exhaust gas turbocharger, which provides an external gas pressure, which is supplied to the compensation ring (14) via a pipeline (32) and/or a hollow screw (See Figure 1); and

wherein a control device (40) is provided, by means of which the amount of the gas pressure is controlled depending upon the motor output and/or by the desired motor brake power and/or the distance between the guide vane assembly (40) and compensation ring (14) (See Column 4, lines 9-67, and Column 5, lines 1-38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dakin et al. (Patent Number 5,851,104).

Dakin discloses the invention as recited above, and further discloses a space (a partial relief) exists between the guide vane assembly (40) and the compensation ring (22); however, Dakin fails to disclose a maximal extension of the compensation ring lying in the range of at a few tenths of millimeters.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the range of at a few tenths of millimeters for a maximal extension of the compensation ring, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (CCPA 1955).

Note that "*the range of at a few tenths of millimeters for a maximal extension of the compensation ring*" is also disclosed by the applicants on pages 3-4, Paragraph [0008] in the instant application.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dakin et al. (Patent Number 5,851,104), in view of Design choice.

Dakin discloses the invention as recited above; however, Dakin fails to disclose the dimension of an outer diameter and an inner diameter, and the weight of the compensation ring.

One having an ordinary skill in the turbocharger for the internal combustion engine art, would have found the compensation ring exhibiting a smaller outer diameter and/or a larger inner diameter and/or a smaller weight than the nozzle ring, as a matter of design choice depending on the turbocharger requirements. Moreover, there is nothing in the record, which establishes that the claimed structure of the compensation ring, presents a novel or unexpected result (See *In re Kuhle*, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Allowable Subject Matter

Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Agahi et al. (US Patent Number 5,769,602) discloses an automatic clamping control.

- Engels et al. (US Patent Number 4,770,603) disclose an exhaust gas turbocharger.
- Swearingen (US Patent Number 4,502,836) discloses a method for nozzle clamping force control.
- Swearingen (US Patent Number 4,300,869) discloses a method and apparatus for nozzle clamping forces in fluid flow control assemblies.
- Swearingen (US Patent Number 4,242,040) discloses thrust adjusting means for nozzle clamp ring.
- Swearingen (US Patent Number 3,495,921) discloses a variable nozzle turbine.
- Browne (US Patent Number 2,341,974) discloses a supercharger control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is ,703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
July 19, 2004



Thai-Ba Trieu
Patent Examiner
Art Unit 3748